

M. J. RYAN.
BURGLAR AND FIRE ALARM.
APPLICATION FILED JULY 1, 1913.

1,156,497.

Patented Oct. 12, 1915.

2 SHEETS—SHEET 1.

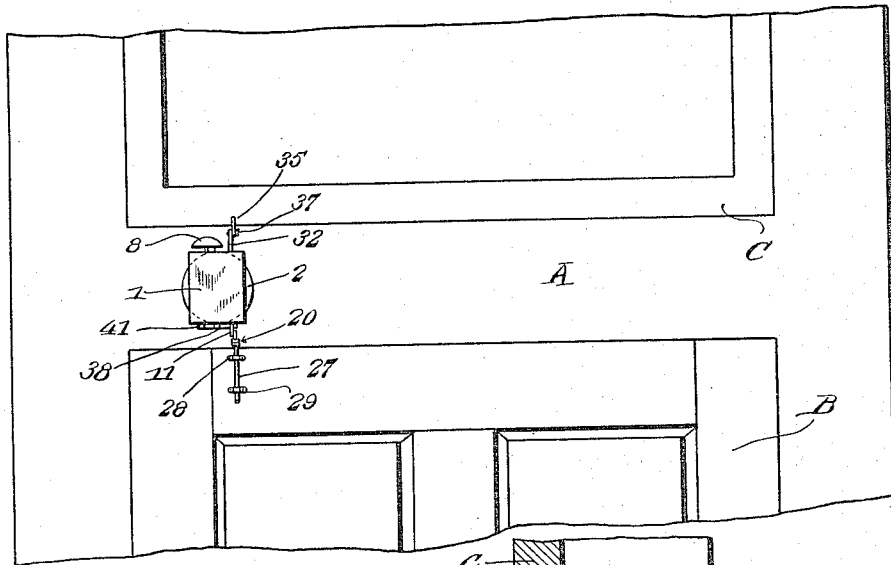


Fig. 1.

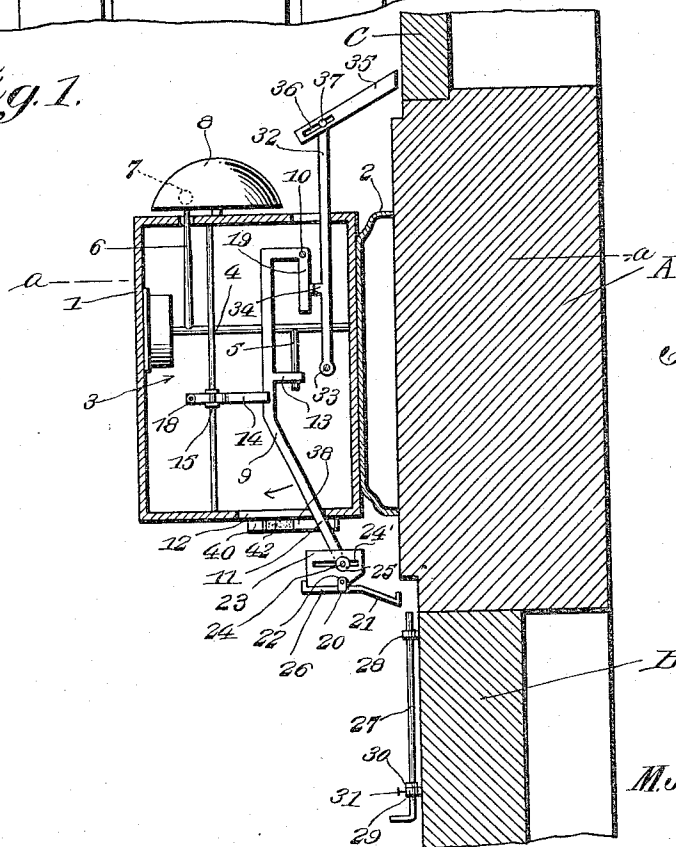


Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

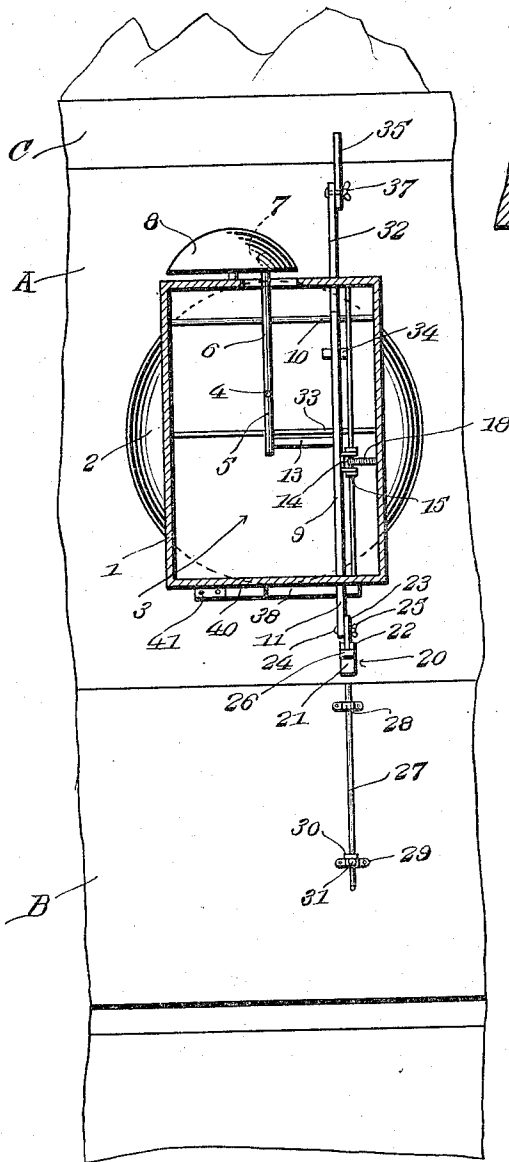


Fig. 4.

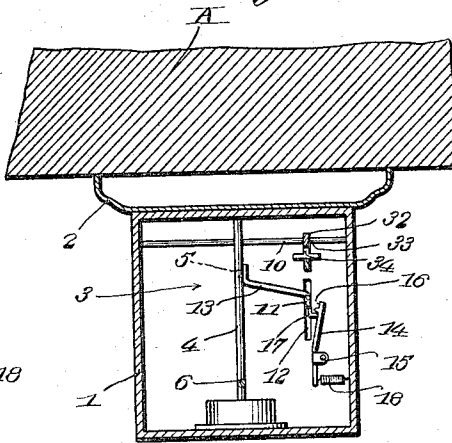
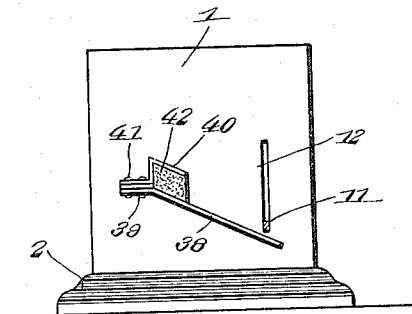


Fig. 5.



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UNITED STATES PATENT OFFICE.

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BURGLAR AND FIRE ALARM.

1,156,497.

Specification of Letters Patent.

Patented Oct. 12, 1915.

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To all whom it may concern:

Be it known that I, MARK J. RYAN, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Burglar and Fire Alarms, of which the following is a specification.

This invention is an improved burglar and fire alarm adapted, when used as a burglar alarm especially, to be attached to a door casing and set in operation when the door or a transom over the door is opened, even to a slight extent, and also adapted to be used as a fire alarm at any desired place and arranged to be set in operation automatically whenever there is a decided rise in temperature, the invention consisting in the construction, combination and arrangement of devices hereinafter described and claimed.

One object of the invention is to provide in connection with the actuating element of an alarm apparatus, a trigger lever to hold the same and a novel, spring-pressed catch having a cam surface to normally hold the trigger element in set position and yet permit the trigger lever to be released.

Another object is to provide an improved form of trip arranged to be attached to the trigger element and to be moved by the opening of a door or window, or the like, so as to release the trigger element and set the alarm apparatus in operation, another object being to provide an improved attachment for connecting the trip to the trigger element.

Another object is to provide an actuating spring to release the lever and a wax holder to support a body of wax or other readily fusible material and normally press the same against the spring so as to restrain the latter from operation excepting when the wax or other fusible body is melted or softened by a dangerous rise in temperature as in the event of a fire.

In the accompanying drawings: Figure 1 is a diagrammatic elevation of a burglar and fire alarm apparatus constructed in ac-

cordance with my invention and arranged 50 for use in connection with a door and a transom over the door. Fig. 2 is a vertical sectional view of the alarm apparatus. Fig. 3 is a similar view on a plane at right angles to that of Fig. 2. Fig. 4 is a sectional 55 view on the plane indicated by the line *a-a* of Fig. 2. Fig. 5 is an inverted plan of the alarm apparatus.

My improved alarm apparatus is here shown as having a casing 1 which is provided on one side with a suction or vacuum 60 cup 2 to enable the casing to be attached to the casing of a door, window or the like without injuring the casing or marring the finish thereof or the varnish thereon.

The alarm apparatus 3 may be of any 65 usual or suitable construction and includes a rock shaft 4 which is the actuating element thereof and which is operated by the escapement of a spring gear. This rock 70 shaft has an arm 5 and also has a vibrator arm 6 which extends through and operates in a slot in the top of the casing and is provided with a head or hammer 7 for striking a bell 8.

In Fig. 1 of the drawing, I show the casing 75 of the alarm apparatus secured to the casing A of a door B and between the top of the door and a transom C. I also provide a trigger lever 9 which is arranged in the casing 1, is pivotally mounted as at 10 and has an arm 11 which extends through and operates in a slot 12 in the bottom of the casing and projects below the casing. This 80 trigger lever has an arm 13 to bear on the arm 5 of the actuating shaft 4 and normally holds the latter in inoperative, set position.

To normally retain the trigger lever in 85 set position, and yet permit it to be turned to release the actuating shaft, I provide a catch 14 which is pivotally mounted as at 15 and has a cam surface 16 for engagement by a detent 17 with which the trigger lever is provided. A spring 18 is connected to the 90 catch and exerts its tension thereon to normally hold the catch in the path of the trigger lever and with its cam surface 16 pre-

sented to and engaged by the detent 17. When, however, the trigger lever is moved to release the actuating shaft the detent 17 slips on the cam surface 16, the catch permitting movement of the trigger lever to release the actuating shaft but the friction created by the tension of the spring 18 between the detent 17 and the cam surface 16 serves to prevent casual movement of the trigger lever.

The trigger lever is also provided with an arm 19. In connection with the trigger lever, I provide a trip 20 which is provided at one end with an inclined cam arm 21. The trip is provided at a point intermediate its ends with a pair of upwardly extending ears 22 which are arranged on opposite sides of an attacher 23 and are connected thereto by a pivot pin 24. The attacher is arranged on one side of the lower portion 11 of the trigger lever, is adjustable thereon and has an adjusting slot 24' through which extends a set screw 25 which engages a threaded opening in said arm of the trigger lever and, hence, adjustably secures the attacher to the trigger lever and permits the adjustment of the attacher together with the trip, toward and from the door casing so as to adapt the device for use in connection with any ordinary door.

The trip, by the engagement of its outer arm 26 with the lower side of the attacher is normally held in horizontal position with its cam arm 21 extending toward the door, but arranged slightly beyond the top or one edge of the door. The door is provided with a push rod 27 which is movable in openings in a pair of studs 28—29 which are adapted to be screwed or otherwise attached to the door.

The push rod has a stop collar 30 thereon to engage the stud 29 and prevent the push rod from dropping and the said stud is provided with a set screw 31 which, when the push rod is moved upwardly so as to project its upper or outer end beyond the top or edge of the door and into the path of the trip may be employed to secure the push rod in set position. When the door is opened, even to a slight extent, the push rod engages the trip and causes the latter through the instrumentality of the attacher to move the trigger lever in the direction indicated by the arrow in Fig. 1 and thus release the arm 13 of the trigger lever from the arm 5 of the actuating shaft 4 and, hence, cause the alarm to operate. The door may be closed, however, without affecting the trigger lever as the push rod, by engaging under the cam surface 21 of the trip will raise the latter out of the way of the push rod. The push rod, hence, may be adjusted as required either when the door is opened or closed. A releasing lever 32 is also provided which

is arranged with its lower portion in the casing 1 and pivotally mounted at its lower end as at 33, the upper portion of the releasing lever extending through a slot in the top of the casing. Said releasing lever has an arm 34 projecting therefrom at right angles thereto for coaction with the arm 19 of the trigger lever to release the latter and at the upper end of the releasing lever is an adjustable trip arm 35 which is provided with a longitudinal slot 36 and is secured to the releasing lever by a set screw 37 which operates in said slot. The said trip arm may be arranged in the path of the transom C, so that when the latter is opened, even to a slight extent, the trip lever will cause the releasing lever to be actuated and, hence, cause the alarm to be sounded.

To adapt the alarm to be sounded in the event of a fire or a dangerous or abnormal increase in temperature in the room or place where the alarm is employed, I provide, on the bottom of the casing an actuating spring 38, one end of which is arranged near the trigger lever arm 11 and extends across the slot 12. This actuating spring is here shown as secured at its opposite end as at 39. A holder 40 is also provided which is here shown as a bent arm attached as at 41 to the secured end of the actuating spring. A body 42, of wax or other easily fusible material is placed in the holder, bears between the latter and the actuating spring and normally holds the actuating spring at one end of the slot 12 and out of engagement with the arm 11 of the trigger lever. In the event of a fire or an abnormal rise in temperature the body 42 will fuse and release the spring 38 and thereupon the latter will strike the arm 11 of the trigger lever and move the latter to releasing position and set off the alarm apparatus.

My improved burglar and fire alarm is very compact, is easily portable and may be readily attached to a door or window in any ordinary room and, hence, is adapted for use by guests in hotels and also in other places.

While I have herein shown and described a preferred form of my invention, I would have it understood that changes may be made in the form, proportion and construction of the several parts, without departing from the spirit of the invention and within the scope of the appended claims.

I claim:—

1. In combination with the actuating element of an alarm apparatus, a trigger lever to hold the same, a spring pressed catch having a cam surface to hold the trigger lever in set position, and means, operated by a door, window or the like, to move the trigger lever to releasing position.

2. In combination with the actuating element of an alarm apparatus, a trigger lever

to hold the same, an attacher adjustably secured to the trigger lever, and a trip carried by the attacher and adapted to be arranged in the path of a door, window or the like
5 for operation thereby when the door or window is open, the said trip being pivotally connected to the attacher and being provided with a cam arm to permit the

closing of the door or window without affecting the trigger lever.

In testimony whereof I affix my signature
10 in presence of two witnesses.

MARK J. RYAN.

Witnesses:

JOHN F. COOK,

JOSEPH F. ROSENBERGER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."